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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,420	07/19/2001	David H. Gracias	H00498/70151 TJO	7277

23628 7590 03/16/2005

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EXAMINER

KIM, PAUL D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	09/909,420		GRACIAS ET AL.	
	Examiner		Art Unit	
	Paul D Kim		3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/10/2004 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Bowden et al. (US PAT. 6,507,989).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this

application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claim 1 Bowden et al. teach a method of self-assembly of mesoscale object comprising step of: allowing a the first, second, third and forth of components (128-134 of Fig. 5 and Figs. 7A-7C) in a non-planar arrangement of components, at least one of the components having at least two contact surface areas that are not distinguishable from each other by another components and forming at least one electrical circuit that traverses at least a portion of the first, second, third and forth components (col. 9, line 53 to col. 10, line 16).

As per claim 2 Bowden et al. also teach that the first, second, third and forth components to assemble under a set conditions to form an interconnection assembly (col. 2, lines 61-65).

As per claim 3 Bowden et al. also teach that the first, second, third and forth components includes a mating surface that matches a mating surfaces of at least one other of e first, second, third and forth components (col. 2, lines 43-49).

As per claim 4 Bowden et al. also teach that the allowing the first, second, third and forth of components (128-134 of Fig. 5 and Figs. 7A-7C) in a non-planar arrangement of component and forming at least one electrical circuit that traverses at least a portion of the first, second, third and forth components (col. 1, line 18 to col. 10, line 16).

As per claim 5 Bowden et al. also teach that the first, second, third and forth of components undergo random contact interaction with each other until the non-planar

arrangement of component is formed as shown in Figs. 5, 7A-7C and 10C (col. 4, lines 32-38).

As per claim 6 Bowden et al. also teach that each mating surface of the first, second, third and forth of components is matched with the other mating surfaces in a fluid such as in water (col. 10, lines 1-4).

As per claims 7 and 8 Bowden et al. also teach that each of the first, second, third and forth of components is electrically connected by an electrical conductor (114) to form an electrical circuit as shown in Fig. 4 (col. 8, line 53 to col. 9, line 45).

As per claim 9 Bowden et al. also teach that the first mating surface is allow to fasten to the second mating surface in a manner that is irreversible under the set condition (col. 2, lines 61-65).

Response to Arguments

4. Applicant's arguments filed 11/10/2004 have been fully considered but they are not persuasive. Applicant argues that the prior art of record fails to disclose the claimed invention such as at least one of the components having at least two contact surface areas that are not distinguishable from each other by another components. Examiner traverses the argument that Fig. 5 of Bowden et al. shows that each of components (128-134) includes three essentially identical mating surfaces (138, equivalent with at least two contact surface areas, which are not distinguishable from each other), each of which matches any of the other mating surfaces (138), thus the components can be readily self-assembled into composite 136 (also see col. 9, lines 53-67). It is meant that

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at least one of the components having at least two contact surface areas of Bowden et al. are not distinguishable from each other by another components.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 8:00 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
Art Unit 3729